

WHAT IS CLAIMED IS:

1. A method for arresting, protecting and / or preserving an organ of a subject mammal which comprises administering an effective amount of a κ M conopeptide to a subject in need thereof.
2. The method of claim 1, wherein said κ M conopeptide is selected from the group consisting of κ M-RIIIK, congeners thereof, analogs thereof and derivatives thereof.
3. The method of claim 1, wherein the organ is either intact in the body of the subject or isolated.
4. The method of claim 2, wherein the organ is either intact in the body of the subject or isolated.
5. The method of claim 1, wherein the organ is selected from the group consisting of a circulatory organ, respiratory organ, urinary organ, digestive organ, reproductive organ, endocrine organ, neurological organ or somatic cell.
6. The method of claim 1, wherein the circulatory organ is a heart.
7. The method of claim 6, wherein the heart is arrested, protected or preserved during open heart surgery, cardioplegia, angioplasty, valve surgery, transplantation, angina or cardiovascular disease so as to reduce heart damage before, during or following cardiovascular intervention or to protect those portions of the heart that have been starved of normal flow of blood, nutrients and/or oxygen.
8. The method of claim 2, wherein the organ is selected from the group consisting of a circulatory organ, respiratory organ, urinary organ, digestive organ, reproductive organ, endocrine organ, neurological organ or somatic cell.
9. The method of claim 2, wherein the circulatory organ is a heart.

10. The method of claim 9, wherein the heart is arrested, protected or preserved during open heart surgery, cardioplegia, angioplasty, valve surgery, transplantation, angina or cardiovascular disease so as to reduce heart damage before, during or following cardiovascular intervention or to protect those portions of the heart that have been starved of normal flow of blood, nutrients and/or oxygen.
11. The method of claim 3, wherein the organ is selected from the group consisting of a circulatory organ, respiratory organ, urinary organ, digestive organ, reproductive organ, endocrine organ, neurological organ or somatic cell.
12. The method of claim 3, wherein the circulatory organ is a heart.
13. The method of claim 12, wherein the heart is arrested, protected or preserved during open heart surgery, cardioplegia, angioplasty, valve surgery, transplantation, angina or cardiovascular disease so as to reduce heart damage before, during or following cardiovascular intervention or to protect those portions of the heart that have been starved of normal flow of blood, nutrients and/or oxygen.
14. The method of claim 4, wherein the organ is selected from the group consisting of a circulatory organ, respiratory organ, urinary organ, digestive organ, reproductive organ, endocrine organ, neurological organ or somatic cell.
15. The method of claim 4, wherein the circulatory organ is a heart.
16. The method of claim 15, wherein the heart is arrested, protected or preserved during open heart surgery, cardioplegia, angioplasty, valve surgery, transplantation, angina or cardiovascular disease so as to reduce heart damage before, during or following cardiovascular intervention or to protect those portions of the heart that have been starved of normal flow of blood, nutrients and/or oxygen.

17. The method of claim 1, wherein an adenosine receptor agonist is also administered to said subject.
18. The method of claim 17, wherein the adenosine receptor agonist is selected from the group consisting of CPA, NECA, CGS-21680, AB-MECA, AMP579, 9APNEA, CHA, ENBA, R-PIA, DPMA, CGS-21680, ATL146e, CCPA, CI-IB-MECA, IB-MECA.
19. The method of claim 1, wherein a local anesthetic is also administered to said subject.
20. The method of claim 19, wherein the local anesthetic is selected from the group consisting of mexilitine, diphenylhydantoin, prilocaine, procaine, mipivacaine, bupivacaine, lidocaine and class 1B anti-arrhythmic agents.
21. The method of claim 20, wherein the class 1B anti-arrhythmic agent is lignocaine.
22. The method of claim 1, wherein a potassium channel opener or agonist is also administered to said subject.
23. The method of claim 22, wherein the potassium channel opener or agonist is selected from the group consisting of cromakalin, pinacidil, nicorandil, NS-1619, diazoxide, and minoxidil.
24. The method of claim 1, wherein a hemostatic agent is also administered to the subject.
25. The method of claim 24, wherein the hemostatic agent is selected from the group consisting of a clot buster agent, a thrombolytic agent, an anti-coagulant agent, an anti-platelet aggregation agent and combination thereof.
26. The method of claim 25, wherein the clot buster agent is selected from the group consisting of streptokinase and ACTIVASE.

27. The method of claim 25, wherein the thrombolytic agent is selected from the group consisting of streptokinase, alteplase, reteplase and tenecteplase..
28. The method of claim 25, wherein the anti-coagulant agent is selected from the group consisting of heparin, enoxaparin and dalteparin.
29. The method of claim 25, wherein the anti-platelet aggregation agent is selected from the group consisting of aspirin, clopidogrel, abciximab, eptifibatide and tirofiban.
30. The method of claim 1, wherein an AV blocker is also administered to the subject.
31. The method of claim 30, wherein the AV blocker is verapamil.
32. The method of claim 1, wherein each agent or combination of agents is administered by a route selected from the group consisting of oral, rectal, intracerebralventricular, intrathecal, epidural, intravenous, intramuscular, subcutaneous, intranasal, transdermal, transmucosal, sublingual, by irrigation, by release pump or by infusion.
33. The method of claim 32, wherein the the route is intravenous and each agent or combination of agents is administered either continuously or intermittantly.
34. The method of claim 33, wherein each agent or combination of agents is mixed with donor blood prior to delivery to the subject, provided that the donor blood is compatible with that of the subject.
35. A method for identifying drug candidates for use as organ arresting, protecting or preserving agents which comprises screening a drug candidate for its action at, or partially at, the same functional site as a κ M conopeptide and capable of elucidation of similar functional response as said conopeptide.

36. The method of claim 35, wherein the displacement of a labeled κ M conopeptide from its receptor or other complex by a candidate drug agent is used to identify suitable candidate drugs.
37. The method of claim 35, wherein a biological assay on a test compound to determine the therapeutic activity is conducted and compared to the results obtained from the biological assay of a κ M conopeptide.
38. The method of claim 35, wherein the binding affinity of a small molecule to the receptor of a κ M conopeptide is measured and compared to the binding affinity of a κ M conopeptide to its receptor.